CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.15/KRIDL/CEMENT/2014-15

Date: 14.07.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	:	Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/TDSD/PR/15/2014-15
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	29.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	170 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	495 Minutes	Not More than 600 Minutes
3	Soundness) by the Le-Chatelier method	IS-4031 (Part 3	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/W.No.15/KRIDL/SAND/2014-15 : 14.07.2014

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.

Reference : BBMP/AEE/TDSD/PR/15/2014-15

Date of Testing : 14.07.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	56	2.80	2.80	97.2	90-100
2.36	237	11.85	14.65	85.4	75-100
1.18	389	19.45	34.10	65.9	55-90
600 Micron	491	24.55	58.65	41.4	35-59
300 Micron	465	23.25	81.90	18.1	8-30
150 Micron	278	13.90	95.80	4.2	0-10

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Job No.: CTCE/BBMP/W.No.15/KRIDL/AGG/2014-15 : 14.07.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.

Reference : BBMP/AEE/TDSD/PR/15/2014-15

Date of Testing : 14.07.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25200**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	982	3.90	3.90	96.10	95-100
20	16237	64.43	68.33	31.67	30-70
10	5121	20.32	88.65	11.35	10-35
4.75	2574	10.21	98.87	1.13	0-5

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TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.

Reference : BBMP/AEE/TDSD/PR/15/2014-15

Date of Testing : 14.07.2014

Material : 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Tabel - 1

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	167	3.34	3.3	96.66	95-100
10	3129	62.58	65.9	34.08	25-55
4.75	1469	29.38	95.3	4.70	0-10

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Job No.: CTCE/BBMP/W.No.15/KRIDL /STEEL/2014-15 14.07.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	:	Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.
Reference	:	BBMP/AEE/TDSD/PR/15/2014-15
Date of Test	:	14.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.10	O.K	O.K

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Date of Test	:	14.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.25	O.K	O.K

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Reference	:	BBMP/AEE/TDSD/PR/15/2014-15
Date of Test	:	14.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.50	O.K	O.K

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Date of Test	:	14.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	16	1.58	520	563	13.65	O.K	O.K

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Reference	:	BBMP/AEE/TDSD/PR/15/2014-15
Date of Test	:	14.07.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	20	2.47	525	569	13.80	O.K	O.K

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.15/KRIDL/BRICKS/2013-14 Date: 12.08.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	:	Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.
REFERENCE	:	BBMP/AEE/TDSD/PR/15/2014-15
SAMPLE ID	:	BRICKS
SAMPLES SUPPLIED BY	:	CLIENT

The results of the tests conducted on the samples are as follows:

Sl. No	Description	Test method as per IS Codes	Result	Requirement as per IS 1077-1992 (Rev-5)
1	Compressive Strength Of Bricks	IS 3495-1992 (Part-1)	5.80 N/mm^2	Class designation 5.0
2	Water Absorption of Bricks	IS 3495-1992 (Part – 2)	9.80 %	Not more than 20 %
3	Efflorescence of Bricks	IS 3495-1992 (Part – 3)	Moderate	Up to 12.5 Class
4	Dimensional Analysis of Bricks (minimum Sampling is 20 Nos)	IS 1077-1992 (Rev – 5)		
(a)	Measurement of Length in mm		4670 mm	(4600 ± 80 mm)
(b)	Measurement of Width in mm		2225 mm	(2200 ± 40 mm)
(c)	Measurement of Height in mm		1420 mm	(1400 ± 40 mm)

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Building & Highway Material Testing Laboratory

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CUBE/2014-15 13.08.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.
Reference	: BBMP/AEE/TDSD/PR/15/2014-15
Sample ID	: Ground Floor Roof Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.07.2014	13.08.2014	8.145	479.5	21.31
2	16.07.2014	13.08.2014	8.256	488.2	21.70
3	16.07.2014	13.08.2014	8.386	505.4	22.46

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Job No.: CTCE/BBMP/W.No.15/KRIDL/CUBE/2014-15 26.09.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	: **Technical Manager,** KRIDL, Bangalore.
Name of the work	: Construction of Primary School Building in Dasarahalli Old Village Ward No.15, BBMP, Bangalore.
Reference	: BBMP/AEE/TDSD/PR/15/2014-15
Sample ID	: First Floor Roof Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.08.2014	26.09.2014	8.285	512.3	22.77
2	29.08.2014	26.09.2014	8.150	489.6	21.76
3	29.08.2014	26.09.2014	8.398	529.6	23.54

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